

Work Order ID 56406

February 23, 2010 8:33:36 AM

Page 1

Item ID: D412-742-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Float Skidtube

Start Date: 2/23/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/24/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

[Handwritten signature]

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



DOCUMENT CONTROL

DC

0.00

Document Control

Memo

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG004

N/A *[Handwritten signature]*

Work Order ID 56406

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Page 2

Item ID: D412-742-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Float Skidtube

Start Date: 2/23/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/24/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00



HandFinish

HandFinishing

0.00

Memo

*****Do not apply LPS, see QC for more info*****

1-Spray inside tube of D3391-021/-023/-025 with LPS-3 as per Dwg D3391

A/R LPS-3

2-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.

A/R Sikaflex-241/-291 112345.

Expiry date: 10/08

3-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Coat bolts with LPS "procyon". Seal all bolts with sikaflex except ones with inserts on inside of tube, hand tighten only bolts with no sikaflex.

A/R LPS Procyon 104251

A/R Sikaflex-241/-291 112345.

Expiry date: 10/08

4-Remove "T" pins once sikaflex is dry.

5-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.

Pto

bl 10-02-24.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D412-742-043 PAR #: _____ Fault Category: Fin Finishing NCR: Yes No DQA: _____ Date: 10/03/16
 Resolution: re-work Disposition: re-work QA: N/C Closed: _____ Date: 10/03/16

NCR: <u>50406</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.12.24	110	Saddle holes don't allow passage of pin. (1) Hole Affected. R.C. Process	<u>GP</u> 10.12.24 per QSI 042	File inner hole to allow passage of pin	<u>BR</u> 1002-24	<u>S</u> 10/02/24	<u>GP</u> 10.12.24 per QSI 042	<u>S</u> 10/02/24

NOTE: Date & initial all entries

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Item ID: D412-742-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Float Skidtube

Start Date: 2/23/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/24/10 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00

⇒ 8/10/02/24



QC

Memo

0.00



Quality Control

130

Packaging

0.00



Packaging

Memo

0.00

Identify and pack for shipping as per PPP D412-742-043

Location:

PPP Rev:

PPS 54757

Per 3/7 @

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/03/05
MF
10-3-4

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Page 1

[illegible]

Required Date: 2/24/10

Required Qty: 1.00

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Location		

ST 1107

112314	13
112720	12
112724	3
112829	1
112991	2
113121	64
113226	344
113644	468
113749	200

24. BR 10-02-24.

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		

ST	766
111982	766

12 BR 10-02-24.

Picklist Print

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Page 2

Work Order ID: 56406

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No 110 Each 517.0000 8.0000



BOLT

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST 517

105906 21

107376 252

113149 ✓ 244

AN960C10L Purchased No 110 Each 388.0000 44.0000



washer

Warehouse Loc Qty Loc Code
Location

OFFSHORE

FG 113288 100

103585 100

Main Warehouse

ST 288

112116 128

112612 160

D3391-021 Manufactured No



Fwd Tube Assembly

had on
 03391-023
 B. 5-29-28
 A MF 10-3-4
 53474

0.0000 1.0000



BR 10-02-23.

44 BR 10-02-24.

8. BR 10-02-24

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Shop Packet Print

Page 2

Picklist Print

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Page 3

Work Order ID: 56406

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Date: 2/23/10

Required Date: 2/24/10

Start Qty: 1.00

Required Qty: 1.00

D3391-023

Manufactured No

110

Each

2.0000

1.0000



Mid Tube Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

40522

54395

2

1

1

110

Each

3.0000

1.0000

D3391-025

Manufactured No



Aft Tube Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

39129

48122

54702

3

1

1

1

54703

1

BR 10-02-23.

1

BR 10-02-23.

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Shop Packet Print

Page 3

Picklist Print

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Page 4

Work Order ID: 56406



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-1 Manufactured No 110 Each 21.0000 1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	2	
33798	2	
Main Warehouse		
ST	19	
47531	1	
50270	1	
51676✓	17	

1 BL 10-02-24.

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Shop Packet Print

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Picklist Print

February 23, 2010 8:33:14 AM

Work Order ID: 56406



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-3 Manufactured No

110

Each

22.0000

1.0000



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

2

33764

2

Main Warehouse

FP

8

50113 ✓

8

Main Warehouse

FP19

11

55489

11

Main Warehouse

ST

1

46445

1

1 PR 10-02-24.

Picklist Print

February 23, 2010 8:33:14 AM

Work Order ID: 56406



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-5 Manufactured No 110 Each 43.0000 1.0000



Wearshoe

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG 2

34806 2

Main Warehouse

FP19 39

51925 1

54772 ✓ 13

55024 12

55333 13

Main Warehouse

ST 2

45824 1

47433 1

1 bl 10-02-24,

Picklist Print

February 23, 2010 8:33:15 AM

Work Order ID: 56406



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM
 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
 IPP Rev:C 07-05-28 As per Rev F JLM
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

D3566-I Manufactured No 110 Each 37.0000 2.0000



Gasket

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FP	32	
52512	3	
54480	1	
55011	1	
55320 ✓	27	
Main Warehouse		
ST	5	
46349	1	
51218	1	
51259	3	

2 bl 10-02 24.

Picklist Print

February 23, 2010 8:33:16 AM

Work Order ID: 56406



Parent Item: D412-742-043



Parent Item Name: Replacement Float Skidtube

Start Date: 2/23/10

Required Date: 2/24/10

Comments: IPP Rev A 05.10.13 New Issue : KJ/JLM :
IPP Rev B 06.02.13 ECN 773 dwg @ rev.D EC
IPP Rev:C 07-05-28 As per Rev F JLM
IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM

Start Qty: 1.00

Required Qty: 1.00

D3566-5

Manufactured No

110

Each

33.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP19

29

55026

17

55335

12

Main Warehouse

ST

4

36113

1

46186

1

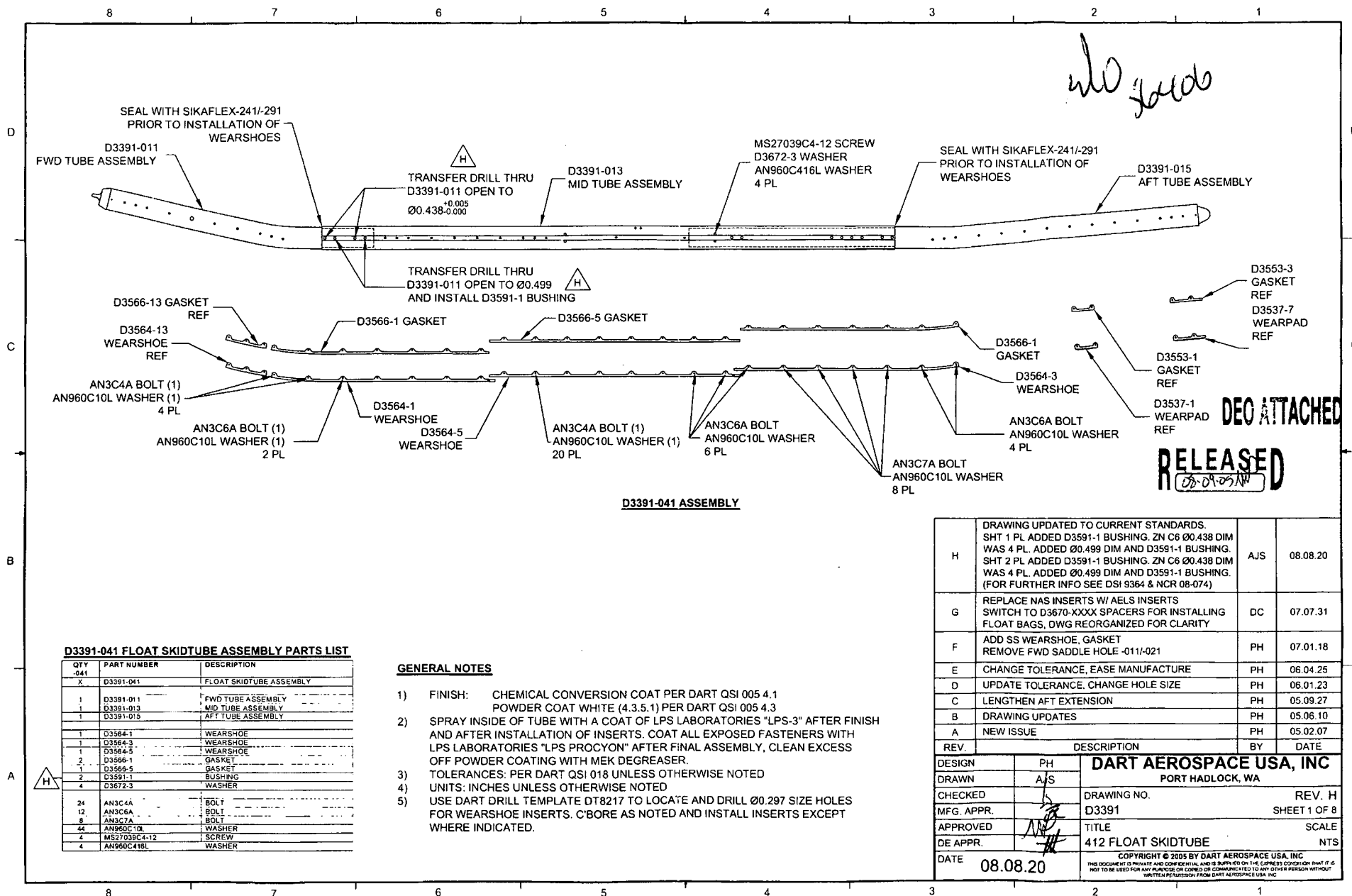
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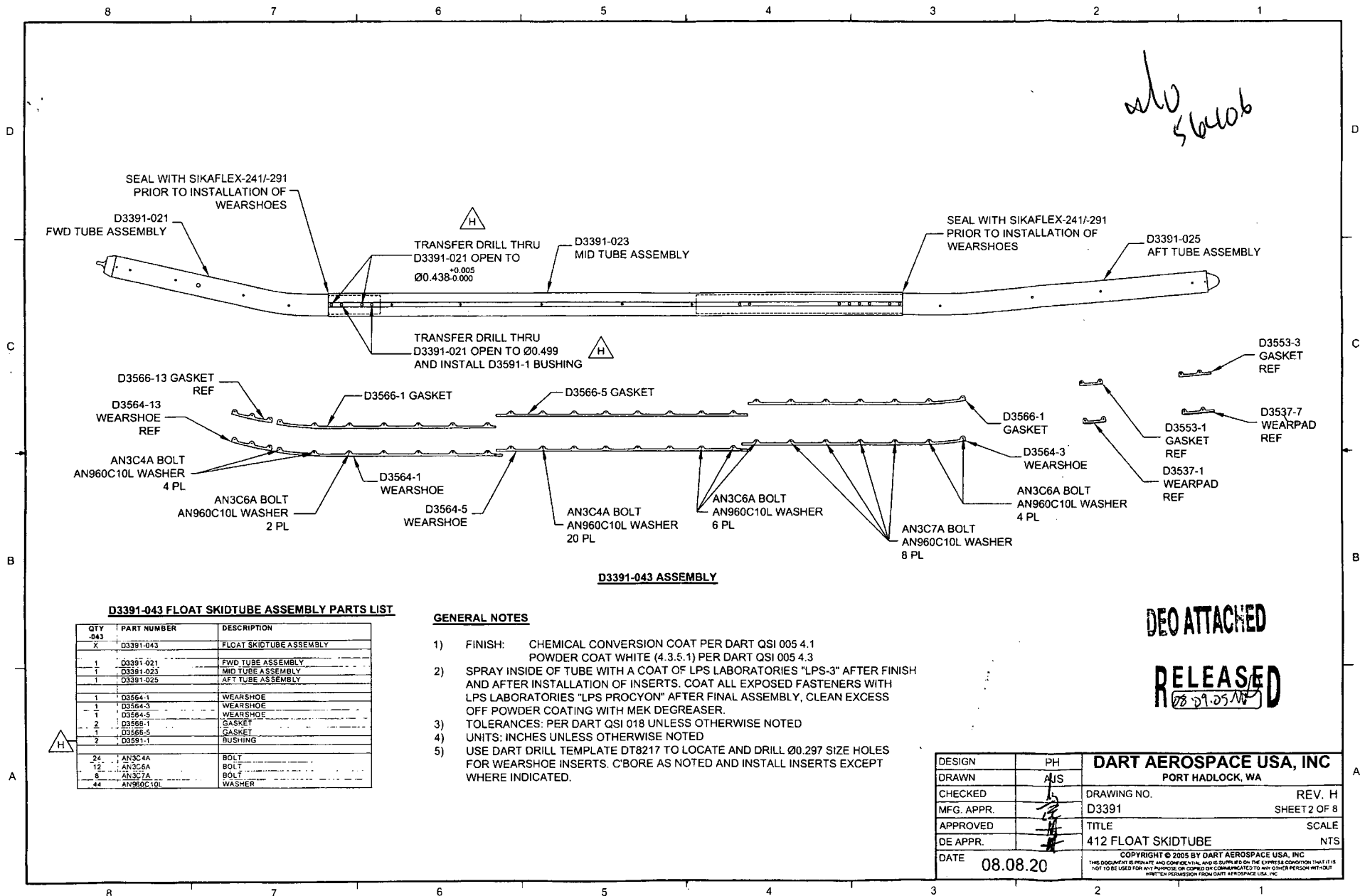
51260

1

1 10-02-24.



sho
56406



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
6	AN3C7A	BOLT
44	AN960C10L	WASHER

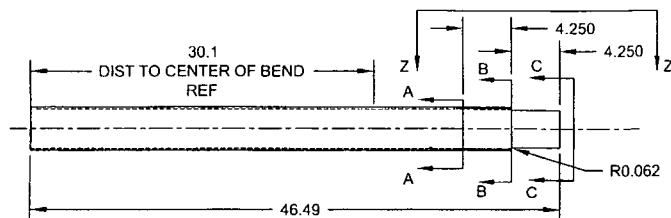
GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C-BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

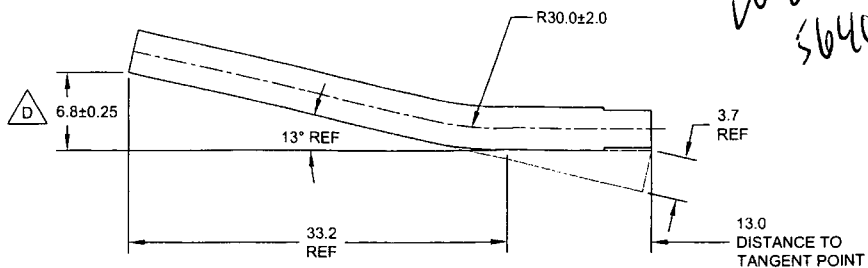
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08-09-2005

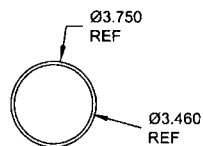
DART AEROSPACE USA, INC			
DESIGN	PH	PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



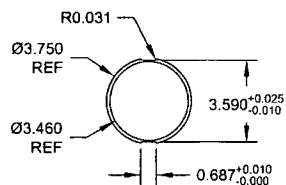
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



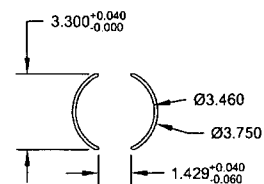
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



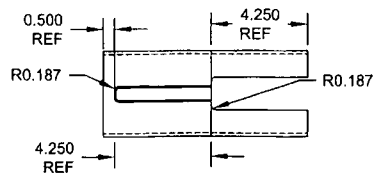
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



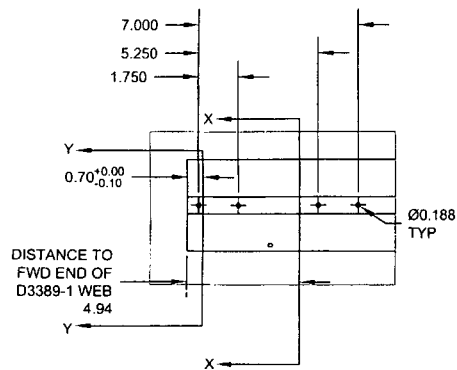
SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

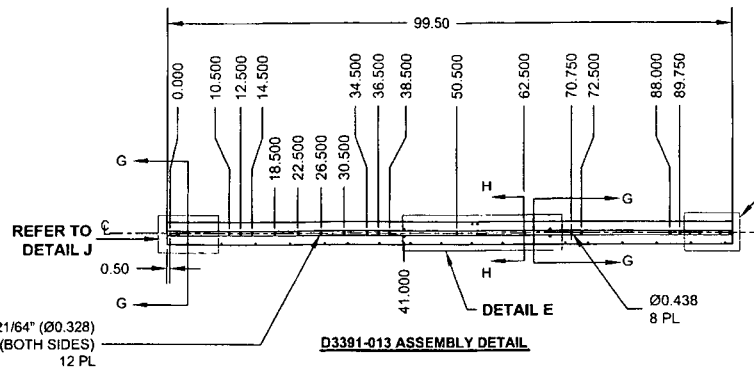
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8-9-05 W

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DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H
MFG. APPR.			SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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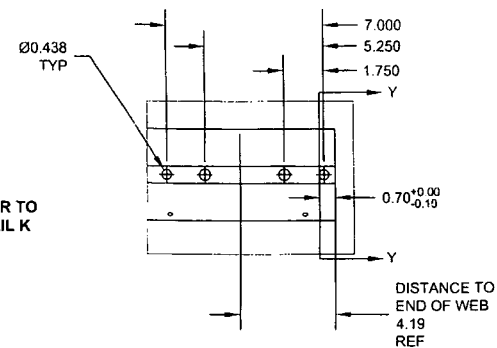
DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



D3391-013 ASSEMBLY DETAIL

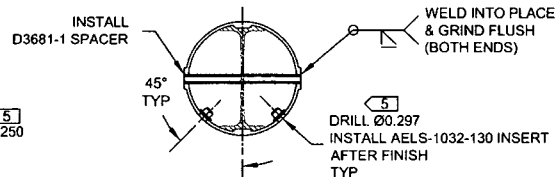
REFER TO
DETAIL K



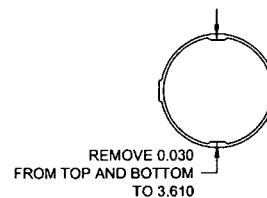
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SCALE 4X



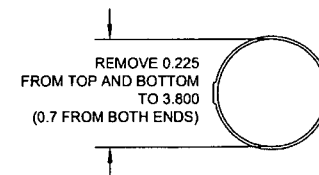
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



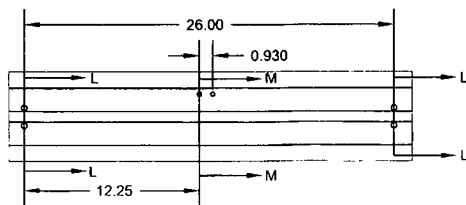
SECTION Y-Y
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

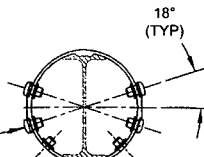
D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004

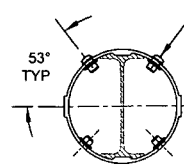


DETAIL E
SCALE NONE

DRILL Ø0.391
INSTALL ALS4-428-165 INSERT
MS27039C4-08 SCREW
D3672-3 WASHER
AN960C416L WASHER
AFTER FINISH
4 PL

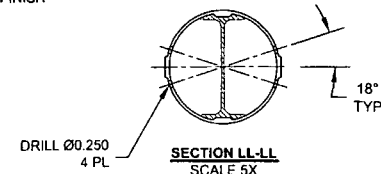


SECTION L-L
SCALE 5X



SECTION M-M
SCALE 5X

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL



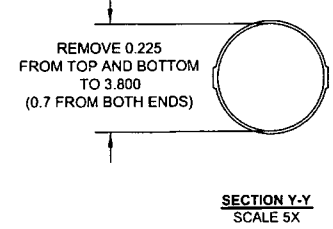
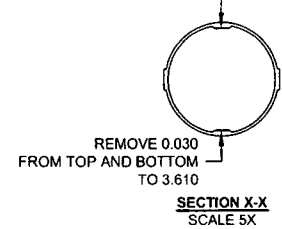
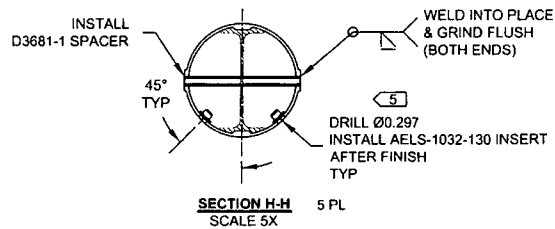
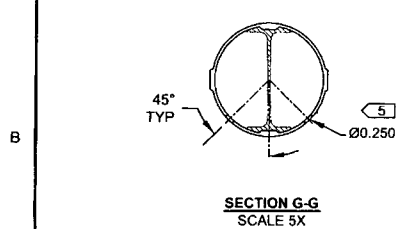
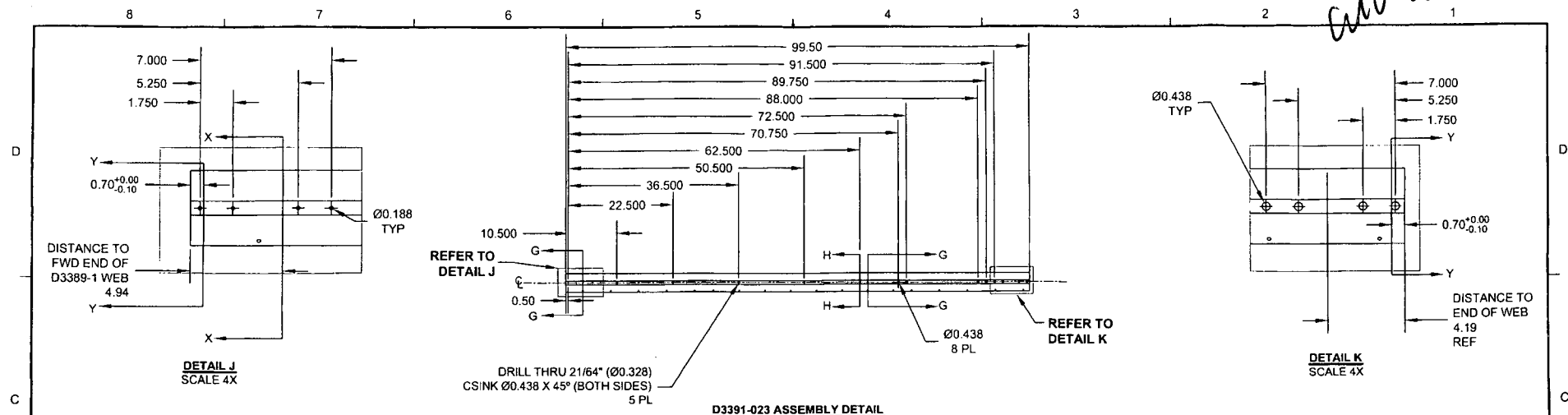
SECTION LL-LL
SCALE 5X

DEO ATTACHED

RELEASED
08-08-20

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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also sketch



D3391-023 MID TUBE ASSEMBLY PARTS LIST

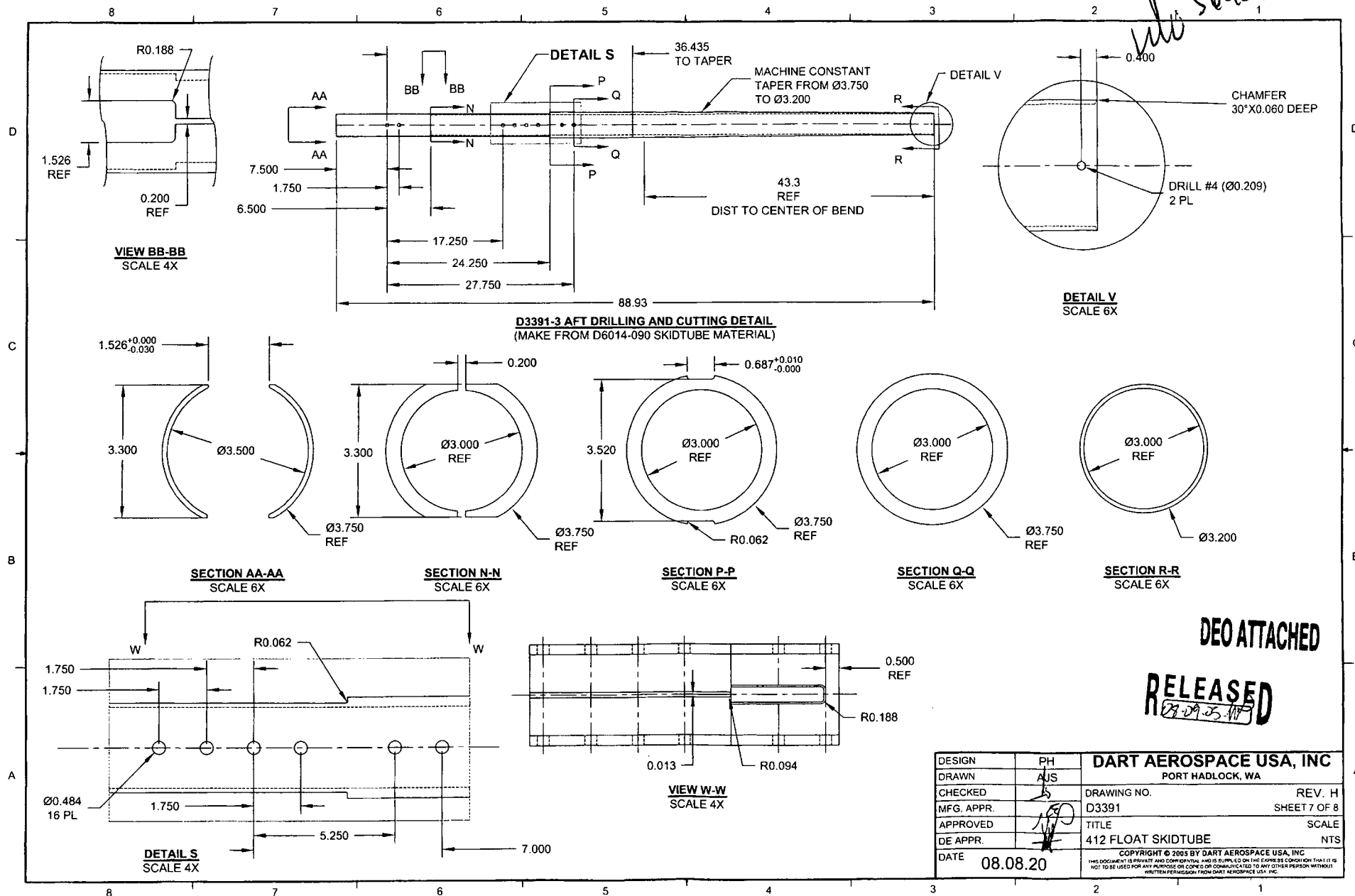
QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	<small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMPLICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC</small>	

DEO ATTACHED
RELEASED
08-01-25-11



DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>h</i>	MFG. APPR. <i>MA</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 09.09.23	DATE 04.04.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02
MP

WLB 56406

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